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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,359	01/21/2004	Yoshihiro Saeki	030712-21	8709

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EXAMINER	
HA, NATHAN W	

ART UNIT	PAPER NUMBER
2814	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,359	SAEKI ET AL.	
	Examiner	Art Unit	
	Nathan W. Ha	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaishi (US 6,798,071, previously cited) and in view of Weiler et al. (US 5,644,167, previously cited, hereinafter, Weiler.)

In regard to claims 1-2 and 10, in fig. 3, Kawaishi discloses a semiconductor device comprising:

a first semiconductor chip 1;

a second semiconductor chip 2 which mounted on the first chip;

a first electrode group 32 located on the first chip so as to be arranged on an outer periphery of the second chip;

a second electrode group 33 located on the first chip and arranged along an outer periphery of the first chip, wherein the second electrode group surrounds the first electrode group;

a third electrode group, not numbered, located on the second chip;

a plurality of first wires 6, fig. 6, for electrically connecting the first electrode group and the third electrode group; and

external connection terminals 3 (including leads 3a-d), located around the first semiconductor chip;

a plurality of second wires 5, in fig. 5, connecting the second group and the external terminals,

wherein the first chip has a first circuit area on which the second chip mounted and a second circuit area which positioned between the first electrode group and the second electrode group, and wherein the second area includes a circuit, or the delay circuit, which prevents crossing therein. See also, col. 6, lines 60-66. It is further noted that the arrangement of the elements as disclosed is susceptible to influence of noise which is generated by the surrounding devices, inherently.

Kawaishi, however, does not expressly describe that the circuit area includes circuit element, but only circuit connection traces. It should be noted that these traces may be part of a circuit element since they also capable of providing electrical connections between devices; therefore, they could be replaced with circuit devices. For instance, Weiler, in fig. 3, discloses an analogous device including semiconductor device and further discloses a circuit element such ESD in the peripheral area wherein the ESD provides protection to the device and eliminated long wire connection between the chip 72 and external device 40.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to replace the element of Kawaishi with an ESD circuit as taught by Weiler in order to take the advantage as mentioned.

In regard to claim 3, Kawaishi further discloses wherein the external connection terminals are conductive leads 3;

the plurality of leads are arranged along the outer periphery of the first semiconductor chip at positions separate from the first semiconductor chip by a predetermined distance; and

the second electrode and the leads are electrically connected to each other by a plurality of second wires 7, fig. 2.

In regard to claims 4 and 11, Kawaishi further discloses wherein a size of the second semiconductor chip is smaller than that of the first semiconductor chip. Fig. 3.

In regard to claims 5, 13, and 20, Kawaishi further discloses wherein the first semiconductor chip and the second semiconductor chip are sealed with a resin 10, fig. 1.

In regard to claims 6 and 14, see the above discussions regarding to claim 3, and the wires also encapsulated in the resin, fig. 3.

In regard to claim 7, wherein the first semiconductor chip is formed on a support, not numbered, see fig. 3.

In regard to claim 8, Kawaishi discloses that the first and second groups are located on the periphery of the first chip. Fig. 3.

In regard to claim 9, Kawaishi discloses the third group is located along the outer periphery of the second chip, fig. 3.

In regard to claims 12, 17, and 19, Kawaishi discloses a relay circuit is analog circuit.

In regard to claim 15, see the discussion regarding to claim 3.

In regard to claims 16 and 18, Kawaishi discloses the central circuit area can occupy outside of the perimeter of the second chip area since the first chip is significantly larger than the second chip. Fig. 3.

Response to Arguments

3. Applicant's arguments filed 1/17/08 have been fully considered but they are not persuasive. For instance, the Applicants repeatedly argue that the combination of Kawaihi and Weiler is improper. As previously pointed out by the office electronic

circuits are formed in different ways. They are composed of electronic devices and pads, wires, traces, for example. Thus, a relay is considered to be part of a circuit. In this case, the relay electrodes as disclosed by Kawaishi falls into this category. The Applicants' specification does not explicitly describe the circuit as claimed, or the drawings. For example, Applicants' drawings only show wires and pads connections. Nowhere in the drawing describes a detailed circuit. Thus, it would be obvious to one of ordinary skill in the art to recognize the equivalency of the elements as taught by the cited reference and the limitation as claimed. However, if the Applicants maintain the argument in order to disqualify the relay electrode as a circuit, the Applicants must explicitly show how "the circuit" is composed. Therefore, Weiler is incorporated herein to further show that a circuit could be formed in the peripheral area of a chip without alter functions of the device. Further, Weiler is incorporated herein to show only the obvious of the electrical traces that would be replaces by another electronic circuit without outer a device function. The replacement in fact provides advantages as a protection circuit, and an ordinary skill in the art would greatly appreciate. The combination would not further alter the Kawaishi's intention since the circuit also provides electrical connections to the external devices. Further, in response to applicant's argument that the cited reference is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, again, the circuit of Weiler is

incorporated herein to show the obvious of replacing electronic elements such as electrical traces with electric circuits.

Kawaishi further discloses a plurality of wires, 5, for external connections.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan W. Ha/
Primary Examiner, Art Unit 2814